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FILE 'HOME' ENTERED AT 18:36:10 ON 23 JUN 2004

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FULL ESTIMATED COST	1.05	1.05

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=> s (bacillus thuringiensis serovar galleriae)  
L1 11 (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)

=> s l1 and mutation  
L2 1 L1 AND MUTATION

=> d l2 ti abs ibib tot

L2 ANSWER 1 OF 1 USPATFULL on STN

TI Protein having pesticidal activity, dna encoding the protein, and  
noxious organism-controlling agent and method

AB Noxious organism-controlling agent of the present invention is effective  
to pests that have acquired a resistance to conventional Bt agents and  
has activity on Coleoptera pests of which only several kinds have been  
reported.

Also, a novel microbe *Bacillus thuringiensis*  
*serovar galleriae* SDS502 strain having an ability of  
producing a toxic protein that can serve as an active ingredient of a  
noxious organism-controlling agent or a protein having a pesticidal  
activity produced by the strain, a protein having an amino acid sequence  
obtainable from the amino acid sequence of the protein by addition,  
deletion or substitution of a plurality of amino acids and having  
similar pesticidal activity, a DNA encoding the protein having  
pesticidal activity, a microbe transformed with the DNA, a plant  
transformed with the DNA and its seed, as well as a noxious  
organism-controlling agent and method are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
ACCESSION NUMBER: 2003:24124 USPATFULL

TITLE: Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method

INVENTOR(S): Asano, Shinichiro, Hokkaido, JAPAN  
Yamanaka, Satoshi, Ibaraki, JAPAN  
Takeuchi, Katsuyoshi, Ibaraki, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017967	A1	20030123
APPLICATION INFO.:	US 2002-89678	A1	20020403 (10)
	WO 2001-JP6660		20010802

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-236140	20000803
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037	
NUMBER OF CLAIMS:	11	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	1204	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

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FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, BIOSIS,  
JICST-EPLUS, CEN, CEABA-VTB, BIOBUSINESS, SCISEARCH, HCAPLUS' ENTERED AT  
18:39:23 ON 23 JUN 2004

L1 11 S (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)  
L2 1 S L1 AND MUTATION

=> s 11 and variant

L3 0 L1 AND VARIANT

=> s 11 and amino acid sequence

Connecting via Winsock to STN

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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=> s (bacillus thuringiensis serovar galleriae)  
L1 11 (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)

=> s l1 and mutation  
L2 1 L1 AND MUTATION

=> d l2 ti abs ibib tot

L2 ANSWER 1 OF 1 USPATFULL on STN  
TI Protein having pesticidal activity, dna encoding the protein, and  
noxious organism-controlling agent and method  
AB Noxious organism-controlling agent of the present invention is effective  
to pests that have acquired a resistance to conventional Bt agents and  
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reported.

Also, a novel microbe *Bacillus thuringiensis*  
*serovar galleriae* SDS502 strain having an ability of  
producing a toxic protein that can serve as an active ingredient of a  
noxious organism-controlling agent or a protein having a pesticidal  
activity produced by the strain, a protein having an amino acid sequence  
obtainable from the amino acid sequence of the protein by addition,  
deletion or substitution of a plurality of amino acids and having  
similar pesticidal activity, a DNA encoding the protein having  
pesticidal activity, a microbe transformed with the DNA, a plant  
transformed with the DNA and its seed, as well as a noxious  
organism-controlling agent and method are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
ACCESSION NUMBER: 2003:24124 USPATFULL

TITLE: Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method

INVENTOR(S): Asano, Shinichiro, Hokkaido, JAPAN  
Yamanaka, Satoshi, Ibaraki, JAPAN  
Takeuchi, Katsuyoshi, Ibaraki, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017967	A1	20030123
APPLICATION INFO.:	US 2002-89678	A1	20020403 (10)
	WO 2001-JP6660		20010802

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-236140	20000803
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037	
NUMBER OF CLAIMS:	11	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	1204	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L1 11 S (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)  
L2 1 S L1 AND MUTATION

=> s l1 and variant

L3 0 L1 AND VARIANT

=> s l1 and amino acid sequence

2 FILES SEARCHED...

3 FILES SEARCHED...

L4 2 L1 AND AMINO ACID SEQUENCE

=> d l1 ti abs ibib tot

L1 ANSWER 1 OF 11 MEDLINE on STN

TI Mannose-specific lectin activity of parasporal proteins from a lepidoptera-specific *Bacillus thuringiensis* strain.

AB Lectin activity, agglutinating sheep erythrocytes, was associated with parasporal inclusion proteins from a Lepidoptera-specific isolate of *Bacillus thuringiensis* serovar *galleriae* (H5ab). The activity was generated when parasporal inclusions were solubilized in an alkaline condition. Proteolytic processing was not required for generation of the lectin activity; the activity level was not affected by the presence/absence of the three proteases (trypsin, chymotrypsin, and proteinase K). SDS-PAGE analysis revealed that (1) alkali-solubilized parasporal inclusion proteins consisted of two major components of 130 kDa and 65 kDa, and (2) proteinase K treatment of alkali-solubilized proteins yielded a single major protein of 60 kDa. Lectin activity of our isolate was strongly inhibited by preincubation with D-mannose, but not with the six other monosaccharides: D-galactose, D-glucose, L-fucose, N-acetyl-

D-glucosamine, N-acetyl- D-galactosamine, and N-acetylneuraminic acid. In contrast, D-mannose did not inhibit the in vivo larvicidal activity of the proteins against the silkworm, Bombyx mori.

ACCESSION NUMBER: 2002671006 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 12432463  
TITLE: Mannose-specific lectin activity of parasporal proteins from a lepidoptera-specific Bacillus thuringiensis strain.  
AUTHOR: Wasano Naoya; Ohgushi Akira; Ohba Michio  
CORPORATE SOURCE: Bioresources and Management Lab, Graduate School of Agriculture, Kyushu University, Fukuoka 812-8581, Japan.. wasano@fitc.pref.fukuoka.jp  
SOURCE: Current microbiology, (2003 Jan) 46 (1) 43-6.  
Journal code: 7808448. ISSN: 0343-8651.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200304  
ENTRY DATE: Entered STN: 20021115  
Last Updated on STN: 20030501  
Entered Medline: 20030430

L1 ANSWER 2 OF 11 USPATFULL on STN  
TI Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method  
AB Noxious organism-controlling agent of the present invention is effective to pests that have acquired a resistance to conventional Bt agents and has activity on Coleoptera pests of which only several kinds have been reported.

Also, a novel microbe **Bacillus thuringiensis serovar galleriae** SDS502 strain having an ability of producing a toxic protein that can serve as an active ingredient of a noxious organism-controlling agent or a protein having a pesticidal activity produced by the strain, a protein having an amino acid sequence obtainable from the amino acid sequence of the protein by addition, deletion or substitution of a plurality of amino acids and having similar pesticidal activity, a DNA encoding the protein having pesticidal activity, a microbe transformed with the DNA, a plant transformed with the DNA and its seed, as well as a noxious organism-controlling agent and method are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:24124 USPATFULL  
TITLE: Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method  
INVENTOR(S): Asano, Shinichiro, Hokkaido, JAPAN  
Yamanaka, Satoshi, Ibaraki, JAPAN  
Takeuchi, Katsuyoshi, Ibaraki, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017967	A1	20030123
APPLICATION INFO.:	US 2002-89678	A1	20020403 (10)
	WO 2001-JP6660		20010802

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-236140	20000803
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037	

NUMBER OF CLAIMS: 11  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 1 Drawing Page(s)  
LINE COUNT: 1204  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 11 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
TI A protein having insecticidal activity, a DNA encoding said protein, and  
an agent and a method for preventing harmful organisms -  
AN AAU80281 Protein DGENE  
AB This invention relates to a crystalline protein comprising a fully  
defined sequence and the nucleotide sequence encoding this protein. The  
protein of the invention is an agent for preventing harmful organisms  
comprising **Bacillus thuringiensis serovar  
galleriae** SDS502, its mutant or a microbe transformed by a DNA  
encoding the protein. This microbe can be used to produce a protein  
containing the protein, or containing a protein having insecticidal  
activity produced by the SDS502, its mutant or a transformed microbe, a  
microbe which is transformed by using the above DNA and produces the  
above protein having insecticidal activity, a plant or a seed transformed  
by using the above DNA, and **Bacillus thuringiensis  
serovar galleriae** SDS502 producing a protein comprising  
and producing a protein showing insecticidal activity. The protein of the  
invention may have insecticidal activity. The agent is used for preventing  
Coleoptera larvae. This sequence represents the **Bacillus thuringiensis**  
insecticide protein of the invention.

ACCESSION NUMBER: AAU80281 Protein DGENE  
TITLE: A protein having insecticidal activity, a DNA encoding said  
protein, and an agent and a method for preventing harmful  
organisms -  
PATENT ASSIGNEE: (SDSB-N)SDS BIOTECH CORP.  
PATENT INFO: JP 2002045186 A 20020212 19p  
APPLICATION INFO: JP 2000-236140 20000803  
PRIORITY INFO: JP 2000-236140 20000803  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
OTHER SOURCE: 2002-356468 [39]  
DESCRIPTION: **Bacillus thuringiensis** insecticidal protein.

L1 ANSWER 4 OF 11 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
TI A protein having insecticidal activity, a DNA encoding said protein, and  
an agent and a method for preventing harmful organisms -  
AN ABK51132 cDNA DGENE  
AB This invention relates to a crystalline protein comprising a fully  
defined sequence and the nucleotide sequence encoding this protein. The  
protein of the invention is an agent for preventing harmful organisms  
comprising **Bacillus thuringiensis serovar  
galleriae** SDS502, its mutant or a microbe transformed by a DNA  
encoding the protein. This microbe can be used to produce a protein  
containing the protein, or containing a protein having insecticidal  
activity produced by the SDS502, its mutant or a transformed microbe, a  
microbe which is transformed by using the above DNA and produces the  
above protein having insecticidal activity, a plant or a seed transformed  
by using the above DNA, and **Bacillus thuringiensis  
serovar galleriae** SDS502 producing a protein comprising  
and producing a protein showing insecticidal activity. The protein of the  
invention may have insecticidal activity. The agent is used for preventing  
Coleoptera larvae. This sequence represents the cDNA encoding the  
**Bacillus thuringiensis** insecticide protein of the invention.

ACCESSION NUMBER: ABK51132 cDNA DGENE  
TITLE: A protein having insecticidal activity, a DNA encoding said  
protein, and an agent and a method for preventing harmful  
organisms -  
PATENT ASSIGNEE: (SDSB-N)SDS BIOTECH CORP.



PATENT INFO: JP 2002045186 A 20020212 19p  
APPLICATION INFO: JP 2000-236140 20000803  
PRIORITY INFO: JP 2000-236140 20000803  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
OTHER SOURCE: 2002-356468 [39]  
CROSS REFERENCES: P-PSDB: AAU80281  
DESCRIPTION: cDNA encoding *Bacillus thuringiensis* insecticidal protein.

L1 ANSWER 5 OF 11 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.  
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TI Mannose-specific lectin activity of parasporal proteins from a  
lepidoptera-specific *Bacillus thuringiensis* strain.

AB Lectin activity, agglutinating sheep erythrocytes, was associated with  
parasporal inclusion proteins from a Lepidoptera-specific isolate of  
*Bacillus thuringiensis* serovar  
*galleriae* (H5ab). The activity was generated when parasporal  
inclusions were solubilized in an alkaline condition. Proteolytic  
processing was not required for generation of the lectin activity; the  
activity level was not affected by the presence/absence of the three  
proteases (trypsin, chymotrypsin, and proteinase K). SDS-PAGE analysis  
revealed that (1) alkali-solubilized parasporal inclusion proteins  
consisted of two major components of 130 kDa and 65 kDa, and (2)  
proteinase K treatment of alkali-solubilized proteins yielded a single  
major protein of 60 kDa. Lectin activity of our isolate was strongly  
inhibited by preincubation with D-mannose, but not with the six other  
monosaccharides: D-galactose, D-glucose, L-fucose, N-acetyl-D-glucosamine,  
N-acetyl-D-galactosamine, and N-acetylneuraminic acid. In contrast,  
D-mannose did not inhibit the in vivo larvicidal activity of the proteins  
against the silkworm, *Bombyx mori*.

ACCESSION NUMBER: 2003307307 EMBASE  
TITLE: Mannose-specific lectin activity of parasporal proteins  
from a lepidoptera-specific *Bacillus thuringiensis* strain.  
AUTHOR: Wasano N.; Ohgushi A.; Ohba M.  
CORPORATE SOURCE: N. Wasano, Biotech. and Food Research Institute, Fukuoka  
Industrial Technology Center, Kurume, Fukuoka 839-0861,  
Japan. wasano@fitc.pref.fukuoka.jp  
SOURCE: Current Microbiology, (2003) 46/1 (43-46).  
Refs: 20  
ISSN: 0343-8651 CODEN: CUMIDD  
COUNTRY: United States  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 004 Microbiology  
LANGUAGE: English  
SUMMARY LANGUAGE: English

L1 ANSWER 6 OF 11 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

TI A protein having insecticidal activity, a DNA encoding said protein, and  
an agent and a method for preventing harmful organisms.

AN 2002-356468 [39] WPIDS

AB JP2002045186 A UPAB: 20020621

NOVELTY - A crystalline protein comprising a fully defined sequence (S1)  
of 1167 amino acids as given in the specification or a sequence in which  
comprises a plural of the amino acids in the (S1).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a  
DNA containing a base sequence encoding the above protein, an agent for  
preventing harmful organisms containing *Bacillus*  
*thuringiensis* serovar *galleriae* SDS502, its  
mutant or (III) a microbe transformed by a DNA containing a base sequence  
encoding a protein comprising (S1) each producing a protein having  
containing (S1), or containing a protein having insecticidal activity  
produced by the SDS502, its mutant or a transformed microbe, a microbe  
which is transformed by using the above DNA and produces the above protein  
having insecticidal activity, a plant or a seed transformed by using the

above DNA, and *Bacillus thuringiensis* serovar *galleriae* SDS502 producing a protein comprising (S1) and producing a protein showing insecticidal activity.

ACTIVITY - Insecticidal.

MECHANISM OF ACTION - None given.

USE - The agent is used for preventing Coleoptera larvae.

Dwg.0/3

ACCESSION NUMBER: 2002-356468 [39] WPIDS  
DOC. NO. CPI: C2002-101492  
TITLE: A protein having insecticidal activity, a DNA encoding said protein, and an agent and a method for preventing harmful organisms.  
DERWENT CLASS: C06 D16  
INVENTOR(S): ASANO, S; TAKEUCHI, K; YAMANAKA, S  
PATENT ASSIGNEE(S): (SDSB-N) SDS BIOTECH CORP; (ASAN-I) ASANO S; (TAKE-I) TAKEUCHI K; (YAMA-I) YAMANAKA S  
COUNTRY COUNT: 2  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 2002045186	A	20020212	(200239)*	19	
US 2003017967	A1	20030123	(200310)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2002045186	A	JP 2000-236140	20000803
US 2003017967	A1	WO 2001-JP6660	20010802
		US 2002-89678	20020403

PRIORITY APPLN. INFO: JP 2000-236140 20000803

L1 ANSWER 7 OF 11 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
TI Mannose-specific lectin activity of parasporal proteins from a  
Lepidoptera-specific *Bacillus thuringiensis* strain.  
AB Lectin activity, agglutinating sheep erythrocytes, was associated with parasporal inclusion proteins from a Lepidoptera-specific isolate of *Bacillus thuringiensis* serovar *galleriae* (H5ab). The activity was generated when parasporal inclusions were solubilized in an alkaline condition. Proteolytic processing was not required for generation of the lectin activity; the activity level was not affected by the presence/absence of the three proteases (trypsin, chymotrypsin, and proteinase K). SDS-PAGE analysis revealed that (1) alkali-solubilized parasporal inclusion proteins consisted of two major components of 130 kDa and 65 kDa, and (2) proteinase K treatment of alkali-solubilized proteins yielded a single major protein of 60 kDa. Lectin activity of our isolate was strongly inhibited by preincubation with D-mannose, but not with the six other monosaccharides: D-galactose, D-glucose, L-fucose, N-acetyl-D-glucosamine, N-acetyl-D-galactosamine, and N-acetylneuraminic acid. In contrast, D-mannose did not inhibit the in vivo larvicidal activity of the proteins against the silkworm, *Bombyx mori*.

ACCESSION NUMBER: 2003:45928 BIOSIS  
DOCUMENT NUMBER: PREV200300045928  
TITLE: Mannose-specific lectin activity of parasporal proteins from a Lepidoptera-specific *Bacillus thuringiensis* strain.  
AUTHOR(S): Wasano, Naoya [Reprint Author]; Ohgushi, Akira; Ohba, Michio  
CORPORATE SOURCE: Biotechnology and Food Research Institute, Fukuoka Industrial Technology Center, Kurume, Fukuoka, 839-0861, Japan

SOURCE: wasano@fitc.pref.fukuoka.jp  
Current Microbiology, (January 2003) Vol. 46, No. 1, pp.  
43-46. print.  
CODEN: CUMIDD. ISSN: 0343-8651.  
DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 15 Jan 2003  
Last Updated on STN: 15 Jan 2003

L1 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Study on the isolation and identification of *Bacillus thuringiensis* in soil samples from Yakushima Island (II) Insecticidal activity and the identification of cry genes.

AB We previously reported that 53 *B. thuringiensis* Isolates in soils from Yakushima Island were serologically investigated. In the present study, the insecticidal activity of these strains against the silkworm *Bombyx mori* and the mosquito larvae *Aedes japonicus* was investigated and the identification of cry genes in these strains was conducted using the PCR method. Oligonucleotide primers used for making DNA probes were cry1Aa, cry1Ab, cry1Ac, cry1Ba, cry1Ca, cry1Da, cry1Ea, cry2Aa, cry4Aa, cry1Ba, cry10Aa and cry 11Aa genes, depending on their specific nucleotide domains. Cry gene profiles of 24 serovar kurstaki strains were the same for cry1Aa, cry1Ab and cry1Ac with a type strain of HD-1, except for cry1Aa the Jano9-2-2 strain composed of cry1Aa and cry1Ab. All of the strains included the cry2Aa gene. In the 14 strains of serovar galleriae, all of the strains included the same cry1Ab and cry2Aa genes as the type strain. In the other serovar from Yakushima Island, *thuringiensis*, *kenyae* and *israelensis* strains displayed different profiles from the type strains used in this experiment. Serovar kurstaki Jano9-2-2 revealed high insecticidal activity against silkworm larvae compared with the control strain HD-1. Serovar *israelensis* Aiko2-1-1 also revealed high activity against the *Aedes japonicus* larvae compared with the type strain. These two strains seem to include novel cry genes.

ACCESSION NUMBER: 1999:495838 BIOSIS

DOCUMENT NUMBER: PREV199900495838

TITLE: Study on the isolation and identification of *Bacillus thuringiensis* in soil samples from Yakushima Island (II) Insecticidal activity and the identification of cry genes.

AUTHOR(S): Kikuta, Harunori [Reprint author]; Kuroiwa, Manabu [Reprint author]; Takagi, Ryuichiro [Reprint author]; Iizuka, Toshihiko

CORPORATE SOURCE: Rakuno Gakuen University, Ebetsu, 069-8501, Japan

SOURCE: Journal of Sericultural Science of Japan, (June, 1999) Vol. 68, No. 3, pp. 225-235. print.  
CODEN: NISZAQ. ISSN: 0037-2455.

DOCUMENT TYPE: Article

LANGUAGE: Japanese

ENTRY DATE: Entered STN: 23 Nov 1999  
Last Updated on STN: 23 Nov 1999

L1 ANSWER 9 OF 11 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN

TI Mannose-specific lectin activity of parasporal proteins from a Lepidoptera-specific *Bacillus thuringiensis* strain

AB Lectin activity, agglutinating sheep erythrocytes, was associated with parasporal inclusion proteins from a Lepidoptera-specific isolate of *Bacillus thuringiensis* serovar *galleriae* (1-15ab). The activity was generated when parasporal inclusions were solubilized in an alkaline condition. Proteolytic processing was not required for generation of the lectin activity; the activity level was not affected by the presence/absence of the three proteases (trypsin, chymotrypsin, and proteinase K). SDS-PAGE analysis revealed that (1) alkali-solubilized parasporal inclusion proteins consisted of two major components of 130 kDa and 65 kDa, and (2) proteinase K treatment of alkali-solubilized proteins yielded a single

major protein of 60 kDa. Lectin activity of our isolate was strongly inhibited by preincubation with D-mannose, but not with the six other monosaccharides: D-galactose, D-glucose, L-fucose, N-acetyl-D-glucosamine, N-acetyl-D-galactosamine, and N-acetylneuraminic acid. In contrast, D-mannose did not inhibit the in vivo larvicidal activity of the proteins against the silkworm, *Bombyx mori*.

ACCESSION NUMBER: 2002:979026 SCISEARCH  
THE GENUINE ARTICLE: 620YZ  
TITLE: Mannose-specific lectin activity of parasporal proteins from a Lepidoptera-specific *Bacillus thuringiensis* strain  
AUTHOR: Wasano N (Reprint); Ohgushi A; Ohba M  
CORPORATE SOURCE: Fukuoka Ind Technol Ctr, Biotechnol & Food Res Inst, Fukuoka 8390861, Japan (Reprint); Kyushu Univ, Grad Sch Agr, Bioresources & Management Lab, Fukuoka 8128581, Japan  
COUNTRY OF AUTHOR: Japan  
SOURCE: CURRENT MICROBIOLOGY, (JAN 2003) Vol. 46, No. 1, pp. 43-46  
  
Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA.  
ISSN: 0343-8651.  
DOCUMENT TYPE: Article; Journal  
LANGUAGE: English  
REFERENCE COUNT: 20

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

L1 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
TI Mannose-specific lectin activity of parasporal proteins from a Lepidoptera-specific *Bacillus thuringiensis* strain  
AB Lectin activity, agglutinating sheep erythrocytes, was associated with parasporal inclusion proteins from a Lepidoptera-specific isolate of *Bacillus thuringiensis* serovar *galleriae* (H5ab). The activity was generated when parasporal inclusions were solubilized in an alkaline condition. Proteolytic processing was not required for generation of the lectin activity; the activity level was not affected by the presence/absence of the three proteases (trypsin, chymotrypsin, and proteinase K). SDS-PAGE anal. revealed that (1) alkali-solubilized parasporal inclusion proteins consisted of two major components of 130 kDa and 65 kDa, and (2) proteinase K treatment of alkali-solubilized proteins yielded a single major protein of 60 kDa. Lectin activity of our isolate was strongly inhibited by preincubation with D-mannose, but not with the six other monosaccharides: D-galactose, D-glucose, L-fucose, N-acetyl-D-glucosamine, N-acetyl-D-galactosamine, and N-acetylneuraminic acid. In contrast, D-mannose did not inhibit the in vivo larvicidal activity of the proteins against the silkworm, *Bombyx mori*.

ACCESSION NUMBER: 2002:877968 HCAPLUS  
DOCUMENT NUMBER: 138:317200  
TITLE: Mannose-specific lectin activity of parasporal proteins from a Lepidoptera-specific *Bacillus thuringiensis* strain  
AUTHOR(S): Wasano, Naoya; Ohgushi, Akira; Ohba, Michio  
CORPORATE SOURCE: Graduate School of Agriculture, Bioresources and Management Lab, Kyushu University, Fukuoka, 812-8581, Japan  
SOURCE: Current Microbiology (2003), 46(1), 43-46  
CODEN: CUMIDD; ISSN: 0343-8651  
PUBLISHER: Springer-Verlag New York Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
TI Novel crystal protein from *Bacillus thuringiensis*

**serovar galleriae** strain SDS502 toxic to scarabaeid insects, gene, use as insecticide

AB A novel crystal protein having insecticidal activity from **Bacillus thuringiensis serovar galleriae** strain SDS502, its gene, and use as insecticide, are disclosed. A method of protecting plants from pests by transforming with the gene is claimed. Plants and seeds transformed with the gene are claimed. The crystal protein was effective against *Anomala cuprea*, *Anomala orientalis*, and *Popillia japonica*.

ACCESSION NUMBER: 2002:112820 HCAPLUS  
DOCUMENT NUMBER: 136:162376  
TITLE: Novel crystal protein from **Bacillus thuringiensis serovar galleriae** strain SDS502 toxic to scarabaeid insects, gene, use as insecticide  
INVENTOR(S): Asano, Shinichiro; Yamanaka, Satoshi; Takeuchi, Katsuyoshi  
PATENT ASSIGNEE(S): SDS Biotech Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002045186	A2	20020212	JP 2000-236140	20000803
US 2003017967	A1	20030123	US 2002-89678	20020403
PRIORITY APPLN. INFO.:			JP 2000-236140 A	20000803
			WO 2001-JP6660 W	20010802

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E3	0 -->	ASANO, S/AU
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E5	2	ASANOBU HIDEAKI/AU
E6	6	ASANOBU T/AU
E7	8	ASANOBU TERUKI/AU
E8	1	ASANOBU Y/AU
E9	4	ASANOBU YASUMASA/AU
E10	1	ASANOH T/AU
E11	1	ASANOH TOSHIO/AU
E12	3	ASANOI E/AU

=> e yamanaka, s/au

E1	12	YAMANAKA ZENKICHI/AU
E2	2	YAMANAKA ZENZO/AU
E3	0 -->	YAMANAKA, S/AU
E4	1	YAMANAKAB TATEO/AU
E5	1	YAMANAKAJIMA H/AU
E6	1	YAMANAKAJIMA HIDEKAZU/AU
E7	1	YAMANAKAL KENZO/AU
E8	1	YAMANAKAM A/AU
E9	1	YAMANAKAM AKIHIRO/AU
E10	1	YAMANAKASHIM HIDEKAZU/AU
E11	2	YAMANAKAYUEN N A/AU
E12	1	YAMANAKE AKIRA/AU

=> e takeuchi, K/au

E1	1	TAKEUCHI ZENJI/AU
E2	1	TAKEUCHI ZENKO/AU

E3 0 --> TAKEUCHI, K/AU  
 E4 1 TAKEUCHIA A/AU  
 E5 1 TAKEUCHIA H/AU  
 E6 1 TAKEUCHIA JIN/AU  
 E7 2 TAKEUCHIA K/AU  
 E8 1 TAKEUCHIA NORIHISA/AU  
 E9 1 TAKEUCHIA T/AU  
 E10 1 TAKEUCHIB T/AU  
 E11 1 TAKEUCHIE T/AU  
 E12 1 TAKEUCHIHAYASHI H/AU

=> s e7

L5 2 "TAKEUCHIA K"/AU

=> d l5 ti abs ibib tot

L5 ANSWER 1 OF 2 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.  
 on STN

TI Management of acute chylothorax with hydrops fetalis diagnosed in the  
 third trimester of pregnancy.

AB A fetus with large pleural effusion and hydrops fetalis diagnosed in the  
 third trimester was successfully treated with prompt vaginal delivery  
 followed by drainage of the pleural cavity, after confirmation of  
 congenital chylothorax and re-expansion of the lung with prenatal  
 thoracentesis.

ACCESSION NUMBER: 1999343296 EMBASE

TITLE: Management of acute chylothorax with hydrops fetalis  
 diagnosed in the third trimester of pregnancy.

AUTHOR: Takeuchia K.; Moriyama T.; Oomori S.; Masuko K.;  
 Maruo T.

CORPORATE SOURCE: Dr. K. Takeuchia, Department of Obstetrics Gynecology,  
 Saiseikai Hospital, 5-1-1 Nakamachi Fujiwaradai, Kitaku,  
 651-1302 Kobe, Japan. kyousuke@skyblue.ocn.ne.jp

SOURCE: Fetal Diagnosis and Therapy, (1999) 14/5 (264-265).  
 Refs: 7

ISSN: 1015-3837 CODEN: FDTSES

COUNTRY: Switzerland

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 007 Pediatrics and Pediatric Surgery  
 010 Obstetrics and Gynecology

LANGUAGE: English

SUMMARY LANGUAGE: English

L5 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Effect of allergen-specific immunotherapy on interleukin-4, interleukin-5  
 and interferon gamma mRNA expression in the nasal mucosae of rats with  
 allergic rhinitis.

AB To elucidate the mechanism of immunotherapy, we tested the effect of  
 ovalbumin and ovalbumin-pullulan conjugate immunotherapy on the expression  
 of interleukin (IL)-4, IL-5 and interferon-gamma (IFN-gamma) mRNA in the  
 nasal mucosa of sensitized rats. Forty-five rats were injected with  
 ovalbumin intraperitoneally on three consecutive days and later were  
 exposed to ovalbumin aerosol. The rats were injected intradermally, on  
 six consecutive days, with saline, ovalbumin or ovalbumin-pullulan  
 conjugate. Later, nasal mucosa was obtained and reverse  
 transcription-polymerase chain reaction (RT-PCR) was performed. Nasal  
 responses and specific immunoglobulin E (IgE) were measured. Although the  
 immunotherapy significantly decreased nasal airway resistance, dye leakage  
 and histamine content in nasal irrigation after allergen challenge, no  
 significant difference was found in IL-4 and IL-5 mRNA expression or in  
 specific IgE level among the three groups. We conclude that in this  
 allergic model, the improvement of nasal responses after immunotherapy was  
 the result of a mechanism other than decrease of T-helper 2 (Th2)  
 cytokines.

ACCESSION NUMBER: 1999:68498 BIOSIS  
 DOCUMENT NUMBER: PREV199900068498  
 TITLE: Effect of allergen-specific immunotherapy on interleukin-4, interleukin-5 and interferon gamma mRNA expression in the nasal mucoas of rats with allergic rhinitis.  
 AUTHOR(S): El-Naggar, M. M.; Ukai, K.; Takeuchia, K.; Sakakura, Yasuo [Reprint author]  
 CORPORATE SOURCE: Dep. Otorhinolaryngology, Mie University School Medicine, 2-174 Edobashi, Tsu, Mie 514-8507, Japan  
 SOURCE: Scandinavian Journal of Immunology, (Dec., 1998) Vol. 48, No. 6, pp. 629-634. print.  
 CODEN: SJIMAX. ISSN: 0300-9475.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 16 Feb 1999  
 Last Updated on STN: 16 Feb 1999

=> d his

(FILE 'HOME' ENTERED AT 18:36:10 ON 23 JUN 2004)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, BIOSIS, JICST-EPLUS, CEN, CEABA-VTB, BIOBUSINESS, SCISEARCH, HCAPLUS' ENTERED AT 18:39:23 ON 23 JUN 2004

L1 11 S (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)  
 L2 1 S L1 AND MUTATION  
 L3 0 S L1 AND VARIANT  
 L4 2 S L1 AND AMINO ACID SEQUENCE  
 E ASANO, S/AU  
 E YAMANAKA, S/AU  
 E TAKEUCHI, K/AU  
 L5 2 S E7

=> s pesticide

L6 203958 PESTICIDE

=> s transform microbe and l6

L7 0 TRANSFORM MICROBE AND L6

=> s l6 and (SDS502)

L8 1 L6 AND (SDS502)

=> d l8 ti abs ibib tot

L8 ANSWER 1 OF 1 USPATFULL on STN

TI Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method

AB Noxious organism-controlling agent of the present invention is effective to pests that have acquired a resistance to conventional Bt agents and has activity on Coleoptera pests of which only several kinds have been reported.

Also, a novel microbe *Bacillus thuringiensis* serovar *galleriae* SDS502 strain having an ability of producing a toxic protein that can serve as an active ingredient of a noxious organism-controlling agent or a protein having a pesticidal activity produced by the strain, a protein having an amino acid sequence obtainable from the amino acid sequence of the protein by addition, deletion or substitution of a plurality of amino acids and having similar pesticidal activity, a DNA encoding the protein having pesticidal activity, a microbe transformed with the DNA, a plant transformed with the DNA and its seed, as well as a noxious organism-controlling agent and method are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:24124 USPATFULL  
TITLE: Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method  
INVENTOR(S): Asano, Shinichiro, Hokkaido, JAPAN  
Yamanaka, Satoshi, Ibaraki, JAPAN  
Takeuchi, Katsuyoshi, Ibaraki, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017967	A1	20030123
APPLICATION INFO.:	US 2002-89678	A1	20020403 (10)
	WO 2001-JP6660		20010802

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-236140	20000803
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037	
NUMBER OF CLAIMS:	11	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	1204	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 18:36:10 ON 23 JUN 2004)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, BIOSIS, JICST-EPLUS, CEN, CEABA-VTB, BIOBUSINESS, SCISEARCH, HCAPLUS' ENTERED AT 18:39:23 ON 23 JUN 2004

L1 11 S (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)  
L2 1 S L1 AND MUTATION  
L3 0 S L1 AND VARIANT  
L4 2 S L1 AND AMINO ACID SEQUENCE  
E ASANO, S/AU  
E YAMANAKA, S/AU  
E TAKEUCHI, K/AU  
L5 2 S E7  
L6 203958 S PESTICIDE  
L7 0 S TRANSFORM MICROBE AND L6  
L8 1 S L6 AND (SDS502)

=> s l6 and l1

L9 1 L6 AND L1

=> d l9 ti abs ibib tot

L9 ANSWER 1 OF 1 USPATFULL on STN  
TI Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method  
AB Noxious organism-controlling agent of the present invention is effective to pests that have acquired a resistance to conventional Bt agents and has activity on Coleoptera pests of which only several kinds have been reported.

Also, a novel microbe *Bacillus thuringiensis* serovar *galleriae* SDS502 strain having an ability of producing a toxic protein that can serve as an active ingredient of a



noxious organism-controlling agent or a protein having a pesticidal activity produced by the strain, a protein having an amino acid sequence obtainable from the amino acid sequence of the protein by addition, deletion or substitution of a plurality of amino acids and having similar pesticidal activity, a DNA encoding the protein having pesticidal activity, a microbe transformed with the DNA, a plant transformed with the DNA and its seed, as well as a noxious organism-controlling agent and method are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:24124 USPATFULL  
TITLE: Protein having pesticidal activity, dna encoding the protein, and noxious organism-controlling agent and method  
INVENTOR(S): Asano, Shinichiro, Hokkaido, JAPAN  
Yamanaka, Satoshi, Ibaraki, JAPAN  
Takeuchi, Katsuyoshi, Ibaraki, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017967	A1	20030123
APPLICATION INFO.:	US 2002-89678	A1	20020403 (10)
	WO 2001-JP6660		20010802

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-236140	20000803
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037	
NUMBER OF CLAIMS:	11	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	1204	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 18:36:10 ON 23 JUN 2004)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, BIOSIS, JICST-EPLUS, CEN, CEABA-VTB, BIOBUSINESS, SCISEARCH, HCAPLUS' ENTERED AT 18:39:23 ON 23 JUN 2004

L1 11 S (BACILLUS THURINGIENSIS SEROVAR GALLERIAE)  
L2 1 S L1 AND MUTATION  
L3 0 S L1 AND VARIANT  
L4 2 S L1 AND AMINO ACID SEQUENCE  
E ASANO, S/AU  
E YAMANAKA, S/AU  
E TAKEUCHI, K/AU  
L5 2 S E7  
L6 203958 S PESTICIDE  
L7 0 S TRANSFORM MICROBE AND L6  
L8 1 S L6 AND (SDS502)  
L9 1 S L6 AND L1

=> s l6 and mutant

L10 1535 L6 AND MUTANT

=> s l10 and variant

L11 453 L10 AND VARIANT

=> s l11 and function  
L12            251 L11 AND FUNCTION

=> s l11 and (no function)  
L13            251 L11 AND (NO FUNCTION)

=> s l11 and (not l12)  
MISSING TERM 'AND (NOT'  
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'(' followed by an operator.

=> end  
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF  
LOGOFF? (Y)/N/HOLD:n

## Refine Search

### Search Results -

Terms	Documents
galleriae and L11	15

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L12

Refine Search

Recall Text

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Interrupt

### Search History

 DATE: Wednesday, June 23, 2004    [Printable Copy](#)    [Create Case](#)
**Set Name Query**

side by side

**Hit Count Set Name**

result set

*DB=USPT; PLUR=YES; OP=OR*

<u>L12</u>	galleriae and L11	15	<u>L12</u>
<u>L11</u>	serovar and L10	55	<u>L11</u>
<u>L10</u>	lepidoptera and L9	1005	<u>L10</u>
<u>L9</u>	l1 and L8	20035	<u>L9</u>
<u>L8</u>	bacillus thuringiensis	22795	<u>L8</u>
<u>L7</u>	l5 and l1	3	<u>L7</u>
<u>L6</u>	L5 and l3	0	<u>L6</u>
<u>L5</u>	L4 and l2	5	<u>L5</u>
<u>L4</u>	Yamanaka.in.	1779	<u>L4</u>
<u>L3</u>	Takeuchi.in.	4891	<u>L3</u>
<u>L2</u>	Asano.in.	2177	<u>L2</u>
<u>L1</u>	pesticidal activity	373367	<u>L1</u>

END OF SEARCH HISTORY

## Hit List

Clear

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Fwd Refs

Bkwd Refs

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### Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 4800085 A

L7: Entry 1 of 3

File: USPT

Jan 24, 1989

US-PAT-NO: 4800085

DOCUMENT-IDENTIFIER: US 4800085 A

TITLE: Slow-release composite and process for producing the same

DATE-ISSUED: January 24, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Masaru	Gunma			JP
Asano; Masaharu	Gunma			JP
Kaetsu; Isao	Gunma			JP
Nakai; Katsuyuki	Gunma			JP
Yamanaka; Hidetoshi	Gunma			JP
Shida; Keizo	Gunma			JP
Shiraishi; Akira	Tokyo			JP

US-CL-CURRENT: 424/462; 264/331.14, 424/468, 424/472, 514/16, 514/17, 930/130,  
930/20, 930/21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw D
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☐ 2. Document ID: US 4652443 A

L7: Entry 2 of 3

File: USPT

Mar 24, 1987

US-PAT-NO: 4652443

DOCUMENT-IDENTIFIER: US 4652443 A

TITLE: Slow-release composite and process for producing the same

DATE-ISSUED: March 24, 1987

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Masaru	Gunma			JP
Asano; Masaharu	Gunma			JP

Kaetsu; Isao	Gunma	JP
Nakai; Katsuyuki	Gunma	JP
<u>Yamanaka; Hidetoshi</u>	Gunma	JP
Shida; Keizo	Gunma	JP
Shiraishi; Akira	Tokyo	JP

US-CL-CURRENT: 424/487; 514/15, 514/965, 930/130, 930/20, 930/21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw De
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☐ 3. Document ID: US 4584136 A

L7: Entry 3 of 3

File: USPT

Apr 22, 1986

US-PAT-NO: 4584136

DOCUMENT-IDENTIFIER: US 4584136 A

TITLE: Process for preparing Estracyt compounds having a carcinostatic bound thereto

DATE-ISSUED: April 22, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Masaru	Gunma			JP
<u>Asano; Masaharu</u>	Gunma			JP
Kaetsu; Isao	Gunma			JP
<u>Yamanaka; Hidetoshi</u>	Gunma			JP
Nakai; Katsuyuki	Gunma			JP
Yuasa; Hisako	Gunma			JP
Shida; Keizo	Gunma			JP

US-CL-CURRENT: 536/5; 536/27.1, 540/113, 540/5, 552/506, 552/626

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw De
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Fwd Refs

Bkwd Refs

Generate OACS

Terms

Documents

L5 and L1

3

Display Format: CIT [Previous Page](#)[Next Page](#)[Go to Doc#](#)

## Hit List

[Clear](#) [Generate Collection](#) [Print](#) [Fwd Refs](#) [Bkwd Refs](#)  
[Generate OACS](#)

Search Results - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 6003939 A

L5: Entry 1 of 5

File: USPT

Dec 21, 1999

US-PAT-NO: 6003939

DOCUMENT-IDENTIFIER: US 6003939 A

TITLE: Side air bag-carrying seat structure

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nakai; Shigeharu	Toyota			JP
Oyabu; Masanori	Toyota			JP
Kato; Hisaaki	Toyota			JP
Asano; Makoto	Toyota			JP
Yamanaka; Hideyuki	Hikinan			JP
Onuki; Yasuji	Yokohama			JP

US-CL-CURRENT: 297/216.13; 297/452.6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 2. Document ID: US 5311924 A

L5: Entry 2 of 5

File: USPT

May 17, 1994

US-PAT-NO: 5311924

DOCUMENT-IDENTIFIER: US 5311924 A

TITLE: Molten metal level control method and device for continuous casting

DATE-ISSUED: May 17, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Asano; Kazuya	Chiba			JP
Kaji; Takayuki	Chiba			JP
Arai; Kazuo	Chiba			JP

Tanaka; Shuji	Chiba	JP
Ibaraki; Michio	Chiba	JP
Nabeshima; Yuki	Chiba	JP
<u>Yamanaka</u> ; Hiromitsu	Chiba	JP
Takashi; Masaki	Chiba	JP
Moriwaki; Saburo	Chiba	JP
Sugizawa; Mototatsu	Chiba	JP
Nomura; Hiroshi	Chiba	JP
Onishi; Masayuki	Chiba	JP

US-CL-CURRENT: 164/453; 164/155.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 3. Document ID: US 4800085 A

L5: Entry 3 of 5

File: USPT

Jan 24, 1989

US-PAT-NO: 4800085

DOCUMENT-IDENTIFIER: US 4800085 A

TITLE: Slow-release composite and process for producing the same

DATE-ISSUED: January 24, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Masaru	Gunma			JP
<u>Asano</u> ; Masaharu	Gunma			JP
Kaetsu; Isao	Gunma			JP
Nakai; Katsuyuki	Gunma			JP
<u>Yamanaka</u> ; Hidetoshi	Gunma			JP
Shida; Keizo	Gunma			JP
Shiraishi; Akira	Tokyo			JP

US-CL-CURRENT: 424/462; 264/331.14, 424/468, 424/472, 514/16, 514/17, 930/130,  
930/20, 930/21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 4. Document ID: US 4652443 A

L5: Entry 4 of 5

File: USPT

Mar 24, 1987

US-PAT-NO: 4652443

DOCUMENT-IDENTIFIER: US 4652443 A

TITLE: Slow-release composite and process for producing the same

DATE-ISSUED: March 24, 1987

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Masaru	Gunma			JP
Asano; Masaharu	Gunma			JP
Kaetsu; Isao	Gunma			JP
Nakai; Katsuyuki	Gunma			JP
Yamanaka; Hidetoshi	Gunma			JP
Shida; Keizo	Gunma			JP
Shiraishi; Akira	Tokyo			JP

US-CL-CURRENT: 424/487; 514/15, 514/965, 930/130, 930/20, 930/21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 5. Document ID: US 4584136 A

L5: Entry 5 of 5

File: USPT

Apr 22, 1986

US-PAT-NO: 4584136

DOCUMENT-IDENTIFIER: US 4584136 A

TITLE: Process for preparing Estracyt compounds having a carcinostatic bound thereto

DATE-ISSUED: April 22, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Masaru	Gunma			JP
Asano; Masaharu	Gunma			JP
Kaetsu; Isao	Gunma			JP
Yamanaka; Hidetoshi	Gunma			JP
Nakai; Katsuyuki	Gunma			JP
Yuasa; Hisako	Gunma			JP
Shida; Keizo	Gunma			JP

US-CL-CURRENT: 536/5; 536/27.1, 540/113, 540/5, 552/506, 552/626

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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galleriae and L11	15

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L12

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Recall Text

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### Search History

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DATE: Wednesday, June 23, 2004   [Printable Copy](#)   [Create Case](#)

**Set Name Query**

side by side

**Hit Count Set Name**

result set

*DB=USPT; PLUR=YES; OP=OR*

<u>L12</u>	galleriae and L11	15	<u>L12</u>
<u>L11</u>	serovar and L10	55	<u>L11</u>
<u>L10</u>	lepidoptera and L9	1005	<u>L10</u>
<u>L9</u>	l1 and L8	20035	<u>L9</u>
<u>L8</u>	bacillus thuringiensis	22795	<u>L8</u>
<u>L7</u>	l5 and l1	3	<u>L7</u>
<u>L6</u>	L5 and l3	0	<u>L6</u>
<u>L5</u>	L4 and l2	5	<u>L5</u>
<u>L4</u>	Yamanaka.in.	1779	<u>L4</u>
<u>L3</u>	Takeuchi.in.	4891	<u>L3</u>
<u>L2</u>	Asano.in.	2177	<u>L2</u>
<u>L1</u>	pesticidal activity	373367	<u>L1</u>

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Search Results - Record(s) 1 through 10 of 15 returned.

☐ 1. Document ID: US 6689743 B1

L12: Entry 1 of 15

File: USPT

Feb 10, 2004

US-PAT-NO: 6689743

DOCUMENT-IDENTIFIER: US 6689743 B1

TITLE: Bacillus thuringiensis isolates and toxins

DATE-ISSUED: February 10, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Payne; Jewel	Davis	CA		
Narva; Kenneth E.	San Diego	CA		
Uyeda; Kendrick Akira	San Diego	CA		
Stalder; Christine Julie	San Diego	CA		
Michaels; Tracy Ellis	Ames	IA		

US-CL-CURRENT: 514/2; 530/350, 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KWIC	Draw D
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☐ 2. Document ID: US 6555655 B1

L12: Entry 2 of 15

File: USPT

Apr 29, 2003

US-PAT-NO: 6555655

DOCUMENT-IDENTIFIER: US 6555655 B1

TITLE: Coleopteran-toxic polypeptide compositions and insect-resistant transgenic plants

DATE-ISSUED: April 29, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rupar; Mark J.	Wilmington	DE		
Donovan; William P.	Levittown	PA		
Chu; Chih-Rei	Exton	PA		
Pease; Elizabeth	Danville	PA		

Tan; Yuping	Fremont	CA
Slaney; Annette C.	Burlington	NJ
Malvar; Thomas M.	Troy	MO
Baum; James A.	Webster Groves	MO

US-CL-CURRENT: 530/350; 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 3. Document ID: US 6500617 B1

L12: Entry 3 of 15

File: USPT

Dec 31, 2002

US-PAT-NO: 6500617

DOCUMENT-IDENTIFIER: US 6500617 B1

TITLE: Optimization of pest resistance genes using DNA shuffling

DATE-ISSUED: December 31, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stemmer; Willem P. C.	Los Gatos	CA		
Castle; Linda A.	Mountain View	CA		
Yamamoto; Takashi	Fremont	CA		

US-CL-CURRENT: 435/6; 435/320.1, 435/410, 435/418, 435/69.1, 435/DIG.1, 435/DIG.14,  
435/DIG.15, 435/DIG.17, 435/DIG.2, 435/DIG.3, 435/DIG.4, 435/DIG.5, 536/23.1,  
536/23.7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 4. Document ID: US 6468523 B1

L12: Entry 4 of 15

File: USPT

Oct 22, 2002

US-PAT-NO: 6468523

DOCUMENT-IDENTIFIER: US 6468523 B1

TITLE: Polypeptide compositions toxic to diabrotic insects, and methods of use

DATE-ISSUED: October 22, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mettus; Anne-Marie Light	Feasterville	PA		
Baum; James A.	Doylestown	PA		

US-CL-CURRENT: 424/93.2; 424/93.461, 514/12, 514/2, 530/350, 530/825

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 5. Document ID: US 6150165 A

L12: Entry 5 of 15

File: USPT

Nov 21, 2000

US-PAT-NO: 6150165

DOCUMENT-IDENTIFIER: US 6150165 A

**\*\* See image for Certificate of Correction \*\***TITLE: Polynucleotides encoding a 130 kDa pesticidal protein from Bacillus thuringiensis isolate PS201T6

DATE-ISSUED: November 21, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Payne; Jewel	Davis	CA		
Narva; Kenneth E.	San Diego	CA		
Uyeda; Kendrick Akira	San Diego	CA		
Stalder; Christine Julie	San Diego	CA		
Michaels; Tracy Ellis	Ames	IA		

US-CL-CURRENT: 435/419; 435/252.3, 435/320.1, 536/23.71, 536/24.33

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 6. Document ID: US 5942658 A

L12: Entry 6 of 15

File: USPT

Aug 24, 1999

US-PAT-NO: 5942658

DOCUMENT-IDENTIFIER: US 5942658 A

TITLE: Transformed plant with Bacillus thuringiensis toxin gene

DATE-ISSUED: August 24, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; William P.	Levittown	PA		
Tan; Yuping	Falls Township	PA		
Jany; Christine S.	Doylestown	PA		
Gonzalez, Jr.; Jose M.	Ewing Township	NJ		

US-CL-CURRENT: 800/279; 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 7. Document ID: US 5854053 A

L12: Entry 7 of 15

File: USPT

Dec 29, 1998

US-PAT-NO: 5854053

DOCUMENT-IDENTIFIER: US 5854053 A

TITLE: Bacillus thuringiensis bacteria

DATE-ISSUED: December 29, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; William P.	Levittown	PA		
Gonzalez, Jr.; Jose M.	Trenton	NJ		

US-CL-CURRENT: 435/252.5; 424/93.461, 435/832

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 8. Document ID: US 5679343 A

L12: Entry 8 of 15

File: USPT

Oct 21, 1997

US-PAT-NO: 5679343

DOCUMENT-IDENTIFIER: US 5679343 A

TITLE: Bacillus thuringiensis cryET4 and cryET5 protein insecticidal composition and method of use

DATE-ISSUED: October 21, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; William P.	Levittown	PA		
Tan; Yuping	Falls Township	PA		
Jany; Christine S.	Doylestown	PA		
Gonzalez, Jr.; Jose M.	Ewing Township	NJ		

US-CL-CURRENT: 424/93.461; 514/12, 530/350

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 9. Document ID: US 5635480 A

L12: Entry 9 of 15

File: USPT

Jun 3, 1997

US-PAT-NO: 5635480

DOCUMENT-IDENTIFIER: US 5635480 A

\*\* See image for Certificate of Correction \*\*

h e b b g e e e f e f g e f b e

TITLE: Bacillus thuringiensis isolates and toxins

DATE-ISSUED: June 3, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Payne; Jewel	Davis	CA		
Narva; Kenneth E.	San Diego	CA		
Uyeda; Kendrick A.	San Diego	CA		
Stalder; Christine J.	San Diego	CA		
Michaels; Tracy E.	Ames	IA		

US-CL-CURRENT: 514/12; 435/69.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw De
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☐ 10. Document ID: US 5616319 A

L12: Entry 10 of 15

File: USPT

Apr 1, 1997

US-PAT-NO: 5616319

DOCUMENT-IDENTIFIER: US 5616319 A

TITLE: Bacillus thuringiensis cryET5 gene and related plasmids, bacteria and insecticides

DATE-ISSUED: April 1, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; William P.	Levittown	PA		
Tan; Yuping	Falls Township	PA		
Jany; Christine S.	Doylestown	PA		
Gonzalez, Jr.; Jose M.	Ewing Township	NJ		

US-CL-CURRENT: 424/93.2; 424/93.461, 435/252.3, 435/252.31, 435/320.1, 435/69.1, 435/71.3, 536/23.1, 536/23.71, 536/24.32

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw De
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☐ 11. Document ID: US 5378625 A

L12: Entry 11 of 15

File: USPT

Jan 3, 1995

US-PAT-NO: 5378625

DOCUMENT-IDENTIFIER: US 5378625 A

TITLE: Bacillus thuringiensis cryIIIC, (b) protein toxic to coleopteran insects

DATE-ISSUED: January 3, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; William P.	Levittown	PA		
Rupar; Mark J.	Wilmington	DE		
Slaney; Annette C.	Hamilton Square	NJ		

US-CL-CURRENT: 435/252.5; 424/93.2, 424/93.461, 435/252.3, 435/320.1, 435/69.1,  
514/12, 514/2, 530/350, 536/22.1, 536/23.1, 536/23.7, 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 12. Document ID: US 5356623 A

L12: Entry 12 of 15

File: USPT

Oct 18, 1994

US-PAT-NO: 5356623

DOCUMENT-IDENTIFIER: US 5356623 A

TITLE: Bacillus thuringiensis cryET1 toxin gene and protein toxic to lepidopteran insects

DATE-ISSUED: October 18, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
von Tersch; Michael A.	Ewing Township	NJ		
Gonzalez; Jose M.	Ewing Township	NJ		

US-CL-CURRENT: 424/93.2; 424/93.461, 435/252.3, 435/252.31, 435/320.1, 435/69.1,  
536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 13. Document ID: US 5322687 A

L12: Entry 13 of 15

File: USPT

Jun 21, 1994

US-PAT-NO: 5322687

DOCUMENT-IDENTIFIER: US 5322687 A

TITLE: Bacillus thuringiensis cryet4 and cryet5 toxin genes and proteins toxic to lepidopteran insects

DATE-ISSUED: June 21, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; William P.	Levittown	PA		
Tan; Yuping	Falls Township, Bucks County	PA		
Jany; Christine S.	Doylestown	PA		
Gonzalez, Jr.; Jose M.	Ewing Township, Mercer County	NJ		

US-CL-CURRENT: 424/93.461; 435/252.3, 435/252.31, 435/320.1, 435/69.1, 435/71.3, 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 14. Document ID: US 5264364 A

L12: Entry 14 of 15

File: USPT

Nov 23, 1993

US-PAT-NO: 5264364

DOCUMENT-IDENTIFIER: US 5264364 A

TITLE: Bacillus thuringiensis cryIIIC(B) toxin gene and protein toxic to coleopteran insects

DATE-ISSUED: November 23, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donovan; Willam P.	Levittown	PA		
Rupar; Mark J.	Wilmington	DE		
Slaney; Annette C.	Hamilton Square	NJ		

US-CL-CURRENT: 435/252.5; 435/252.3, 435/320.1, 435/6, 435/69.1, 536/22.1, 536/23.1, 536/23.2, 536/23.7, 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 15. Document ID: US 4713241 A

L12: Entry 15 of 15

File: USPT

Dec 15, 1987

US-PAT-NO: 4713241

DOCUMENT-IDENTIFIER: US 4713241 A

TITLE: Bacterial insecticide and production thereof

DATE-ISSUED: December 15, 1987

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wakisaka; Yoshiharu	Hyogo			JP
Uo; Junko	Kyoto			JP
Matsumoto; Kouichi	Osaka			JP
Ohodaira; Osamu	Osaka			JP
Tanaka; Kentaro	Osaka			JP

US-CL-CURRENT: 424/93.461; 424/520, 435/252.5, 435/71.3, 435/832

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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File: USPT

Sep 10, 1996

US-PAT-NO: 5554534

DOCUMENT-IDENTIFIER: US 5554534 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Bacillus thuringiensis toxins active against scarab pests

DATE-ISSUED: September 10, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Michaels; Tracy E.	Ames	IA		
Narva; Kenneth E.	San Diego	CA		
Foncerrada; Luis	Vista	CA		

US-CL-CURRENT: 435/252.3; 435/252.31, 514/12, 536/23.71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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